8120-08-P

TENNESSEE VALLEY AUTHORITY

Supplemental Environmental Impact Statement – Browns Ferry Nuclear Site Subsequent License Renewal

AGENCY: Tennessee Valley Authority.

ACTION: Notice of intent.

SUMMARY: The Tennessee Valley Authority (TVA) intends to prepare a Supplemental Environmental Impact Statement (SEIS) to address the potential environmental effects associated with obtaining subsequent license renewals (SLR) for the Browns Ferry Nuclear Plant (BFN) Units 1, 2, and 3 located in Limestone County, Alabama. Renewal of the operating licenses would allow the plant to continue to operate for an additional 20 years beyond the current operating licenses expiration dates of 2033, 2034, and 2036 for Units 1, 2, and 3, respectively. TVA plans to evaluate a variety of alternatives including a no-action alternative. Public comments are invited to identify other potential alternatives, relevant information, and analysis related to the proposed action.

DATES: The public scoping period begins with the publication of this Notice in the Federal Register and comments on the scope of the SEIS must be received or postmarked by July 1, 2021. To accommodate social distancing guidelines and public health recommendations related to the COVID-19 pandemic, TVA will have a virtual meeting room available for the duration of the scoping period. Visit https://www.tva.com/nepa to obtain more information.

ADDRESSES: Comments may be submitted in writing to J. Taylor Cates, NEPA Specialist, 1101 Market Street, BR 2C-C, Chattanooga, TN, 37402. Comments may also be submitted online at: https://www.tva.com/nepa or by email to nepa@tva.gov. Due to COVID-19 teleworking restrictions, electronic submission of comments is encouraged to ensure timely review and consideration.

FOR FURTHER INFORMATION CONTACT: Other related questions should be sent to Tennessee Valley Authority, J. Taylor Cates, NEPA Specialist, 1101 Market Street, BR 2C-C, Chattanooga, TN, 37402, or 423-751-2732 / jtcates@tva.gov.

SUPPLEMENTARY INFORMATION: This Notice is provided in accordance with the Council on Environmental Quality's (CEQ) regulations for implementing the National Environmental Policy Act (NEPA) at 40 CFR parts 1500-1508 and Section 106 of the National Historic Preservation Act (NHPA), and its implementing regulations (36 CFR Part 800). The SEIS will be prepared consistent with the 2020 CEQ regulations for implementing NEPA at 40 CFR parts 1500-1508 (85 FR 43304-43376, Jul. 16, 2020). The regulations of the Nuclear Regulatory Commission (NRC) in 10 CFR part 54 set forth the applicable license extension requirements.

TVA Power System

TVA is a corporate agency and instrumentality of the United States, created by and existing pursuant to the TVA Act of 1933 (16 U.S.C. Part 831), and created to, among other things, foster the social and economic welfare of the people of the Tennessee Valley region and promote the proper use and conservation of the Valley's natural resources. TVA generates and distributes electricity for business customers and local power distributors, serving more than 10 million people in parts of seven

southeastern states. TVA is fully self-financed without Federal appropriations, and funds virtually all operations through electricity sales and power system bond financing. In addition to operating and investing its revenues in its electric system, TVA provides flood control, navigation and management for the Tennessee River system, and assists local power companies and state and local governments with economic development efforts.

Dependable electrical capacity on the TVA power system is about 33,000 Mega Watts Electric (MWe). TVA's current generating assets include one pumped-storage facility, one diesel generator site, three nuclear plants, five coal plants, nine combustion turbine plants, eight combined cycle plants, 14 solar energy sites, 29 hydroelectric dams, and several small renewable generating facilities. A portion of delivered power is obtained through long-term power purchase agreements. About 13 percent of TVA's annual generation is from hydro; 14 percent is from coal; 27 percent is from natural gas; 41 percent is from nuclear; and the remainder is from wind and solar. TVA also gains available capacity through its energy efficiency programs. TVA transmits electricity from these facilities over almost 16,000 miles of transmission lines. Like other utility systems, TVA has power interchange agreements with utilities surrounding the Tennessee Valley region, and routinely buys and sells power.

Background

TVA operates BFN Units 1, 2, and 3 in Limestone County, Alabama. BFN is located on an 840-acre tract on the north shore of Wheeler Reservoir at Tennessee River Mile (TRM) 294, approximately 10 miles northwest of Decatur, Alabama, and 10 miles southwest of Athens, Alabama. BFN consists of three General Electric boiling water reactors (BWRs) and associated turbine generators that collectively supply approximately 3900 MWe of electric power to the TVA transmission and distribution system.

In March 2002 and June 2002, TVA issued a Final SEIS (FSEIS) and a Record of Decision (ROD) for the operating license renewal of BFN. TVA submitted a License Renewal Application (LRA) to the NRC in December 2003 for a 20-year renewal of the operating licenses for each BFN unit. The environmental conclusions of the NRC FSEIS did not differ from the TVA FSEIS conclusions, and the NRC issued Supplement 21 regarding Browns Ferry Nuclear Plant Units 1, 2, and 3, to the Generic EIS (GEIS) for License Renewal of Nuclear Plants (NUREG-1437) in June 2005. The NRC issued operating license renewals for Units 1, 2, and 3 in May 2006, allowing continued operation of the three BFN units until 2033, 2034, and 2036, respectively.

In September 2015, TVA submitted a license amendment request (LAR) for extended power uprate (EPU) of all three units. The NRC issued a draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) in the Federal Register on December 1, 2016 for public comment. On May 22, 2017 the NRC issued the Final EA and FONSI related to the EPU license amendment.

Project Purpose and Need

The purpose of the proposed action is to help provide continued generation of baseload power between 2033 and 2053 by obtaining license renewals to operate BFN Units 1, 2, and 3. BFN is considered baseload power because the plant generally runs at close to maximum output. BFN's current baseload generation supports future forecasted baseload power needs, as outlined in TVA's 2019 Integrated Resource Plan (IRP), by helping to maintain grid stability and generating capacity for TVA's generation portfolio mix. As an integral part of TVA's current generation portfolio, in 2020, BFN produced approximately 20 percent of TVA's average generation capacity. Renewal of the current

operating licenses would allow BFN to continue supplying approximately 3,900 MWe capacity of baseload power.

TVA needs to generate sufficient electricity to supply the Tennessee Valley with increasingly clean, reliable, and affordable electricity for the foreseeable future for the region's homes and businesses, working with local power companies to keep service steady and reliable. By renewing the licenses, TVA would maximize use of existing assets to support TVA's goals of generating electricity at the lowest feasible cost for the people of the Tennessee Valley. BFN's carbon-free generating capacity supports TVA's goal of a net-zero carbon emissions generating system by 2050.

Preliminary Proposed Action and Alternatives

TVA proposes to submit a Subsequent LRA (SLRA) to the NRC requesting renewal of BFN operating licenses. Renewal of the current operating licenses would permit operation for an additional 20 years past the current operating license terms, which expire in 2033, 2034, and 2036 for Units 1, 2, and 3, respectively. This SEIS is being prepared to provide the public and TVA decision-makers an assessment of the environmental impacts of renewing BFN Unit 1, 2, and 3 operations, as well as provide the public an opportunity to participate in the SEIS process. License renewal does not require any new construction or modifications beyond normal maintenance and minor refurbishment. However, there are other proposed projects not directly related to SLR that are connected to, or could affect, license renewal.

The SEIS proposes to address a range of alternatives (A-D) including: (A) the No-Action Alternative; (B) BFN Subsequent License Renewal; (C) Use of Existing Generating Assets; and (D) Use of Existing and Construction of New Generating Assets. Two additional alternatives, (E) Replacement of BFN Generating Capacity Entirely with

Renewable Energy Sources and (F) Replacement of BFN Generating Capacity Entirely with Purchase Power, were considered but eliminated.

Anticipated Environmental Impacts

The SEIS will include a detailed evaluation of the environmental, social, and economic impacts associated with implementation of the proposed action. Resource areas to be addressed in the SEIS include, but are not limited to: air quality; aquatics; botany; climate change; cultural resources; emergency planning; floodplains; geology and groundwater; hydrothermal; land use; navigation; noise and vibration; radiological safety; soil erosion and surface water; socioeconomics and environmental justice; threatened and endangered species; transportation; visual; waste; water use; wetlands; and wildlife. Measures to avoid, minimize, and mitigate adverse effects will be identified and evaluated in the SEIS.

In preparing this SEIS, TVA will consider the analysis within the NRC's Generic Environmental Impact Statement (GEIS) for License Renewal of Nuclear Plants (NUREG-1437, Revision 1), where the NRC generically considered the environmental effects of renewing nuclear power plant operating licenses for a 20-year period (results are codified in 10 CFR Part 51). The GEIS identified 78 environmental issues and reached generic conclusions on environmental impacts for 59 of those issues that apply to all plants or to plants with specific design or site characteristics. The GEIS' generic assessment is relevant to the assessment of impacts of the proposed action at BFN. Generic information from the NRC GEIS that is related to the current assessment would be incorporated by reference, generally following the tiering process described in 40 CFR §1501.11, with the SEIS providing a more narrow analysis relevant to the specific aspects of this proposed project. Additional plant-specific review would be conducted for impacts

not covered by the GEIS and which are encompassed by the range of resource issue areas identified above.

Anticipated Permits and Other Authorizations

TVA anticipates consulting with the required authorities including, but not limited to: the Endangered Species Act; Bald and Golden Eagle Protection Act; Rare Species Protection and Conservation Act; National Historic Preservation Act; Clean Air Act; and Federal Clean Water Act.

TVA anticipates seeking required permits or authorizations as appropriate, from the following governmental entities: the Nuclear Regulatory Commission; US Army Corps of Engineers; US Coast Guard; US Environmental Protection Agency; Alabama Department of Environment and Conservation; US Fish and Wildlife Service; Alabama State Historic Preservation Officer; and Tribal Historic Preservation Officers. This is not an exhaustive list, other permits or authorizations may be sought as required or appropriate.

Public Participation and Scoping Process

TVA seeks comment and participation from all interested parties for the proposed action, including, but not limited to, assisting TVA in determining the scope of issues for analysis in the SEIS. Information about this project is available at https://www.tva.com/nepa, which includes a link to an online public comment page. TVA invites the public to identify other alternatives, and analysis relevant to the proposed action. Comments must be received or postmarked no later than July 1, 2021. Federal, state, local agencies, and Native American Tribes are also invited to provide comments.

Please note that any comments received, including names and addresses, will become part of the project administrative record and will be available for public inspection.

To accommodate social distancing guidelines and public health recommendations related to the COVID-19 pandemic, TVA will have a virtual meeting room available for the duration of the scoping period that includes a range of information on the proposed action. Visit https://www.tva.com/nepa to obtain more information about the virtual open house.

SEIS Preparation and Schedule

TVA will consider comments received during the scoping period and develop a scoping report which will be published at https://www.tva.com/nepa. The scoping report will summarize public and agency comments that were received and identify the projected schedule for completing the SEIS process. Following completion of the environmental analysis for SLR, TVA will post a Draft SEIS for public review and comment on the project web page. TVA anticipates holding a public open house, which may be virtual, after releasing the Draft SEIS. Open house details will be posted on TVA's website in conjunction with the Draft SEIS. TVA expects to release the Draft SEIS in mid-2022.

TVA will consider comments received on the Draft SEIS, as well as cost, engineering, risk and other applicable evaluations before selecting one or more alternatives as preferred in the Final SEIS. TVA projects completing a Final SEIS in early 2023. A final determination on proceeding with the preferred alternative will be documented in a ROD.

Authority: 40 CFR 1501.9.

Rebecca Tolene,

Vice President, Environment.

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